



## **Credible NCS Accident Sequences - A UK Perspective**

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11<sup>th</sup> June 2019

## Does the UK have a Similar Challenge with Interpreting “Credible” ?

**Question to UK WPC: “Put the Following Eight Terms in Order of Decreasing Probability (Quantitative / Qualitative)”**

Incredible ; Unlikely ; Impossible ; Not Credible ; Not Reasonably Foreseeable ; Deterministic ; Inconceivable ; Intolerable

| RESULTS FOR “NOT CREDIBLE” |     |   |   |   |   |   |   |   |
|----------------------------|-----|---|---|---|---|---|---|---|
| Position                   | 1   | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Votes                      | --- | 1 | 2 | 4 | 6 | 5 | 3 | 2 |

### WPC Draft Paper on NCS Terms & Definitions

- No Consensus Reached on “Not Credible”
- Ranging from  $< 10^{-5}y^{-1}$  -  $10^{-7}y^{-1}$  (but also Dictionary Definition)
- Varies Between Sites (so Ensure Site Use is Understood)



## Where does the UK Regulator Come from on Credible Faults ? (1)



**Worth  
Reading**

### Nimrod Accident – 2<sup>nd</sup> September 2006

- 14 Deaths
- Safety Case Principles Similar to Nuclear
- Independent Review Highlighted Numerous Issues with Safety Case (e.g. 1300 'Hazards' Assessed / No Involvement of Operations in Hazard Identification)
- Major Relevance to **all** Safety Cases, Not Just Military

- (3) *Wood-for-the-trees:*  
Safety Cases do not see the wood for the trees, giving equal attention and treatment to minor irrelevant hazards as to major catastrophic hazards, and failing to highlight, and concentrate on the principal hazards.

## Where does the UK Regulator Come from on Credible Faults ? (2)

**Under UK Safety Law, Employers are Legally Responsible for Reducing Risks to As Low As Reasonably Practicable (ALARP) – Holistic Across all Safety Hazards**



**Recognised in Regulatory Guidance that Over-Conservative Approach to Credibility of (Criticality) Hazards Can Result in Grossly Disproportionate Sacrifice, Particularly for Other Safety Hazards & Costs {But Need to Provide Evidence to Support Claim that “Not Credible”}**

## FOCUS AREA – “Of Course it’s Credible, It Happened in One of Our Facilities X Years Ago”

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**Vessel Accumulations**  
*{Sampling Frequency}*

**Respect the Past, but Intelligently Apply it to the Present !**



